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SSK  
2-9-00

1 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

2 In re application of

3 BARRY G. BROOME, ET AL

4 Serial No. 09/074,474

5 Filed May 7, 1998

6 For SINGLE OBJECTIVE LENS  
7 FOR USE WITH CD OR DVD  
8 OPTICAL DISKS



Art Unit : 2752

Examiner : Kim-Kwok CHU

January 25, 2000

9 Hon. Commissioner of Patents  
and Trademarks  
10 Washington, D.C. 20231

11 INFORMATION DISCLOSURE STATEMENT

12 Sir:

13 The prior art being submitted herewith was located in a  
14 PCT International Search in a PCT application No. PCT/US99/09897  
15 based upon this U.S. application. The Search Report was com-  
16 pleted on July 30, 1999. This Information Disclosure Statement  
17 is accompanied by the fee set forth in 37 C.F.R. § 1.17(p) in the  
18 amount of \$240.

19 1. The three-page International Search Report mailed  
20 August 20, 1999 is enclosed. The Search Report indicates that  
21 most of the art cited is category "A" and, therefore, background  
22 prior art. The background prior art is not submitted in this  
23 filing. However, four references are cited and noted to be  
24 category "X" documents with respect to independent claims 1 and 6  
25 as well as to claims 10 and 11. Applicants respectfully submit

1 that the claims as amended patentably distinguish over those four  
2 references for reasons stated below.

3 2. EPO patent application No. EP 0 838 812 A2, owned by  
4 Konica Corporation, does not use diffractives. Rather the patent  
5 teaches the use of a stepped surface which utilizes multiple  
6 refraction to get normal resolution. The steps in the surface  
7 are not small enough to achieve diffraction and the text at page  
8 6, lines 3-13, clearly indicates that the stepped surfaces are  
9 only providing refraction. The patent does not suggest or teach  
10 the use of diffraction.

11 3. The second and third references cited in the Inter-  
12 national Search Report, namely Japanese patent JP 09 179020 A  
13 (Asahi Optical Co Ltd), and U.S. patent 5,838,496 to Maruyama et  
14 al, are corresponding applications and the applicants have  
15 accordingly not translated the Japanese patent. The Maruyama  
16 patent (as well as the corresponding Japanese patent) teaches the  
17 use of one relatively expensive 650 nm laser. Since the patent  
18 teaches only the use of a single laser, the lens described in the  
19 patent simply does not have to deal with the problem of sphero-  
20 chromatism. The problem of spherochromatism arises when two or  
21 more lasers of different wavelength are utilized with a single  
22 objective lens in reading disks having different substrate  
23 thicknesses, all as disclosed in detail in applicants' pending  
24 U.S. application.

25 4. European patent application No. EP 0 844 606 A1 owned  
26 by Matsushita Electric Industrial Co., Ltd. does teach the use

1  
2 of a lens with central and outer zones, as shown in Fig. 2A.  
3 However, this patent does not teach or suggest the use of a  
4 diffractive. Similarly, the patent does not discuss the problem  
5 of spherochromatism or a way of correcting spherochromatism.

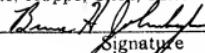
6 We enclose Form PTO/SB/08A.

7 Respectfully submitted,

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18 I hereby certify that this correspondence is  
19 being deposited with the United States Postal  
20 Service as first class mail in an envelope  
21 addressed to: Commissioner of Patents and  
22 Trademarks, Washington, D.C. 20231, on  
23 Jan 25, 2000

24 \_\_\_\_\_ Reg. No. 24,982 of  
25 Eckhoff, Hoppe, Slick, Mitchell & Anderson  
26   
Signature  
1/25/2000  
Date